

U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		AMAT/5192	09/776,329
<b>LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>		Applicant	Confirmation
		Seutter, et al.	No. 9575
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		February 02, 2001	2812 22

**U.S. Patent Documents**

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
TMT	A1	4,058,430	11/15/77	Suntola et al.	156	611	11/25/1975
	A2	4,389,973	06/28/83	Suntola et al.	118	725	12/11/1981
	A3	4,413,022	11/01/83	Suntola et al.	427	255.2	06/21/1979
	A4	4,486,487	12/04/84	Skarp	428	216	04/25/1983
	A5	4,767,494	08/30/88	Kobayashi et al.	156	606	09/19/1986
	A6	4,806,321	02/21/89	Nishizawa et al.	422	245	07/21/1985
	A7	4,829,022	05/09/89	Kobayashi et al.	437	107	12/09/1986
	A8	4,834,831	05/30/89	Nishizawa et al.	156	611	09/04/1987
	A9	4,838,983	06/13/89	Schumaker et al.	156	613	03/18/1988
	A10	4,838,993	06/13/89	Aoki et al.	156	643	12/03/1987
	A11	4,840,921	06/20/89	Matsumoto	437	89	06/30/1988
	A12	4,845,049	07/04/89	Sunakawa	437	81	03/28/1988
TMT	A13	4,859,625	08/22/89	Nishizawa et al.	437	81	11/20/1987

**Foreign Patent Documents**

*Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
						YES	NO
TMT	B1	01/66832 A2	09/13/2001	WO	C30B	16/44	X
	B2	01/40541 A1	06/07/2001	WO	C23C	16/40	X
	B3	01/36702 A1	05/25/2001	WO	C23C	16/00	X
	B4	01/29893 A1	04/26/2001	WO	H01L	21/768	X
TMT	B5	01/29891 A1	04/26/2001	WO	H01L	21/768	X

**OTHER ART**

*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.	
TMT	C1	Hultman, et al., "Review of the thermal and mechanical stability of TiN-based thin films", <i>Zeitschrift Fur Metallkunde</i> , 90(10) (Oct. 1999), pp. 803-813.
TMT	C2	Klaus, et al., "Atomic Layer Deposition of SiO <sub>2</sub> Using Catalyzed and Uncatalyzed Self-Limiting Surface Reactions", <i>Surface Review &amp; Letters</i> , 6(3&4) (1999), pp. 435-448.
Examiner	T. M. Thomas	
	Date Considered	01/16/03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5192		Serial No. 09/776,329	
<b>LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>					Applicant Seutter, et al.		Confirmation No. 9575	
(Use several sheets if necessary)					Filing Date February 02, 2001		Group 2812	
Examiner Unknown								

APR 04 2002  
PATENT & TRADEMARK OFFICE

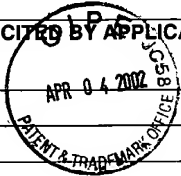
U.S. Patent Documents							
*Examiner Initial	Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
TMT	A14	4,859,627	08/22/89	Sunakawa	437	81	07/01/1988
	A15	4,861,417	08/29/89	Mochizuki et al.	156	610	03/24/1988
	A16	4,876,218	10/24/89	Pessa et al.	437	107	09/26/1988
	A17	4,927,670	05/22/1990	Erbil	427	255.3	06/22/1988
	A18	4,931,132	06/05/90	Aspnes et al.	156	601	10/07/1988
	A19	4,960,720	10/02/90	Shimbo	437	105	08/24/1987
	A20	4,975,252	12/04/90	Nishizawa et al.	422	245	05/26/1989
	A21	4,993,357	02/19/91	Scholz	118	715	12/21/1989
	A22	5,013,683	05/07/91	Petroff et al.	437	110	01/23/1989
	A23	5,082,798	01/21/92	Arimoto	437	108	09/27/1990
	A24	5,085,885	02/04/92	Foley et al.	477	38	09/10/1990
	A25	5,091,320	02/25/92	Aspnes et al.	437	8	06/15/1990
	A26	5,130,269	07/14/92	Kitahara et al.	437	111	04/25/1989
TMT	A27	5,166,092	11/24/92	Mochizuki et al.	437	105	10/30/1990

Foreign Patent Documents							
*Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
						YES	NO
TMT	B6	01/29280 A1	04/26/2001	WO	C23C	16/32	X
	B7	01/27347 A1	04/19/2001	WO	C23C	16/44	X
	B8	01/27346 A1	04/19/2001	WO	C23C	16/44	X
TMT	B9	01/15220 A1	03/01/2001	WO	H01L	21/768	X

OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
TMT	C3 Yamaguchi, et al., "Atomic-layer chemical-vapor-deposition of silicon dioxide films with extremely low hydrogen content", <i>Appl. Surf. Sci.</i> , Vol. 130-132 (1998), pp. 202-207.
TMT	C4 George, et al., "Surface Chemistry for Atomic Layer Growth", <i>J. Phys. Chem.</i> , Vol. 100 (1996), pp. 13121-131.
Examiner	T.M. Thomas
Date Considered	01/16/03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5192		Serial No. 09/776,329	
<b>LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>					Applicant Seutter, et al.		Confirmation No. 9575	
(Use several sheets if necessary)					Filing Date February 02, 2001		Group 2812 22	
Examiner Unknown								



U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
TMT	A28	5,225,366	07/06/93	Yoder	437	108	06/22/1990
	A29	5,246,536	09/21/93	Nishizawa et al.	156	610	03/10/1989
	A30	5,250,148	10/05/93	Nishizawa et al.	156	611	11/12/1991
	A31	5,254,207	10/19/93	Nishizawa et al.	156	601	11/30/1992
	A32	5,256,244	10/26/93	Ackerman	156	613	02/10/1992
	A33	5,270,247	12/14/93	Sakuma et al.	437	133	07/08/1992
	A34	5,278,435	01/11/94	Van Hove et al.	257	184	06/08/1992
	A35	5,281,274	01/25/94	Yoder	118	697	02/04/1993
	A36	5,290,748	03/01/94	Knuuttila et al.	502	228	07/16/1992
	A37	5,294,286	03/15/94	Nishizawa et al.	156	610	01/12/1993
	A38	5,296,403	03/22/94	Nishizawa et al.	437	133	10/23/1992
	A39	5,300,186	04/05/94	Kitahara et al.	156	613	04/07/1992
TMT	A40	5,311,055	05/10/94	Goodman et al.	257	593	11/22/1991

Foreign Patent Documents							
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation
							YES NO
TMT	B10	00/79576 A1	12/28/2000	WO	H01L	21/205	X
	B11	00/79019 A1	12/28/2000	WO	C23C	16/00	X
TMT	B12	00/63957 A1	10/26/2000	WO	H01L	21/205	X

OTHER ART		
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
TMT	C5	George, et al., "Atomic layer controlled deposition of SiO <sub>2</sub> and Al <sub>2</sub> O <sub>3</sub> using ABAB...binary reaction sequence chemistry", <i>Appl. Surf. Sci.</i> , Vol. 82/83 (1994), pp. 460-467.
TMT	C6	Wise, et al., "Diethyldiethoxysilane as a new precursor for SiO <sub>2</sub> growth on silicon", <i>Mat. Res. Soc. Symp. Proc.</i> , Vol. 334 (1994), pp. 37-43.

Examiner	T. M. Thomas	Date Considered	01/16/03
----------	--------------	-----------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5192		Serial No. 09/776,329	
<b>LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>					Applicant Seutler, et al.		Confirmation No. 9575	
(Use several sheets if necessary)					Filing Date February 02, 2001		Group 2812	
Examiner Unknown								

**U.S. Patent Documents**

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
TMT	A41	5,316,615	05/31/94	Copel	117	95	03/09/1993	
	A42	5,316,793	05/31/94	Wallace et al.	427	248.1	07/27/1992	
	A43	5,330,610	07/19/94	Eres et al.	117	86	05/28/1993	
	A44	5,336,324	08/09/94	Stall et al.	118	719	12/04/1991	
	A45	5,338,389	08/16/94	Nishizawa et al.	117	89	04/21/1993	
	A46	5,348,911	09/20/94	Jurgensen et al.	117	91	04/26/1993	
	A47	5,374,570	12/20/94	Nasu et al.	437	40	08/19/1993	
	A48	5,395,791	03/07/95	Cheng et al.	437	105	10/20/1993	
	A49	5,438,952	08/08/1995	Otsuka	117	84	01/31/1994	
	A50	5,439,876	08/08/95	Graf et al.	505	447	08/16/1993	
	A51	5,441,703	08/15/95	Jurgensen	422	129	03/29/1994	
	A52	5,443,033	08/22/95	Nishizawa et al.	117	86	03/11/1994	
	A53	5,443,647	08/22/95	Aucoin et al.	118	723 ME	07/11/1994	
TMT	A54	5,455,072	10/03/95	Bension et al.	427	255.7	11/18/1992	

**Foreign Patent Documents**

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B13	00/54320 A1	09/14/2000	WO	H01L	21/44		X
	B14	00/16377 A2	03/23/2000	WO	H01L	---		X
	B15	00/15881 A2	03/23/2000	WO	C30B	---		X
TMT	B16	00/15865 A1	03/23/2000	WO	C23C	16/00		X

**OTHER ART**

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
TMT	C7	Ninisto, et al., "Synthesis of oxide thin films and overlayers by atomic layer epitaxy for advanced applications", <i>Mat. Sci. &amp; Eng.</i> , Vol. B41 (1996), pp. 23-29.
Examiner	T. M. Thomas	
Date Considered	01-16-03	

**\*EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5192		Serial No. 09/776,329	
<b>LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>					Applicant Seutter, et al.		Confirmation No. 9575	
(Use several sheets if necessary)					Filing Date February 02, 2001		Group 2812	
Examiner Unknown								

APR 04 2002  
U.S. DEPT. OF COMMERCE  
PATENT & TRADEMARK OFFICE


U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
TMT	A55	5,458,084	10/17/95	Thorne et al.	117	89	12/09/1993
	A56	5,469,806	11/28/95	Mochizuki et al.	117	97	08/20/1993
	A57	5,480,818	01/02/96	Matsumoto et al.	437	40	02/09/1993
	A58	5,483,919	01/16/96	Yokoyama et al.	117	89	08/17/1994
	A59	5,484,664	01/16/96	Kitahara et al.	428	641	01/21/1994
	A60	5,503,875	04/02/96	Imai et al.	427	255.3	03/17/1994
	A61	5,521,126	05/28/96	Okamura et al.	437	235	06/22/1994
	A62	5,527,733	06/18/96	Nishizawa et al.	437	160	02/18/1994
	A63	5,532,511	07/02/96	Nishizawa et al.	257	627	03/23/1995
	A64	5,540,783	07/30/96	Eres et al.	118	725	05/26/1994
	A65	5,601,651	02/11/97	Watabe	118	715	12/14/1994
	A66	5,616,181	04/01/97	Yamamoto et al.	118	723 ER	11/21/1995
TMT	A67	5,637,530	06/10/97	Gaines et al.	114	105	06/10/1996

For Ign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B17	99/41423 A2	08/19/1999	WO	C23C	---		X
	B18	99/29924 A1	06/17/1999	WO	C23C	16/04		X
	B19	99/01595	01/14/1999	WO	C30B	25/14		X
TMT	B20	96/18756 A1	06/20/1996	WO	C23C	16/08		X

OTHER ART		
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
TMT	C8	Klaus, et al., "Atomically controlled growth of tungsten and tungsten nitride using sequential surface reactions". <i>Appl. Surf. Sci.</i> , Vol 162-163 (2000), pp. 479-491.
Examiner	T. M. Thomas	
Date Considered	01/16/03	
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.		

T.M. Thomas

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5192		Serial No. 09/776,329	
<b>LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>					Applicant Seutter, et al.		Confirmation No. 9575	
(Use several sheets if necessary)					Filing Date February 02, 2001		Group 2812	
Examiner Unknown								



U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
TMT	A68	5,641,984	06/24/97	Aftergut et al.	257	433	08/19/1994
	A69	5,644,128	07/01/97	Wollnik et al.	250	251	08/25/1994
	A70	5,693,139	12/02/97	Nishizawa et al.	117	89	06/15/1993
	A71	5,705,224	01/06/98	Murota et al.	427	248.1	01/31/1995
	A72	5,707,880	01/13/98	Aftergut et al.	437	3	01/17/1997
	A73	5,711,811	01/27/98	Suntola et al.	118	711	11/28/1995
	A74	5,730,802	03/24/98	Ishizumi et al.	118	719	12/27/1996
	A75	5,747,113	05/05/98	Tsai	427	255.5	07/29/1996
	A76	5,749,974	05/12/98	Habuka et al.	118	725	07/13/1995
	A77	5,796,116	08/18/98	Nakata et al.	257	66	07/25/1995
	A78	5,807,792	09/15/98	Ilg et al.	438	758	12/18/1996
	A79	5,830,270	11/03/98	McKee et al.	117	106	08/05/1996
TMT	A80	5,835,677	11/10/98	Li et al.	392	401	10/03/1996

Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B21	96/17107 A1	06/06/1996	WO	C23C	16/44		X
	B22	93/02111 A1	02/04/1993	WO	C08F	4/78		X
	B23	91/10510 A1	07/25/1991	WO	B01J	37/02		X
TMT	B24	0 799 641 A2	10/08/1997	EP	B01J	20/32		X

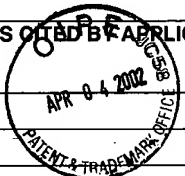
OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
TMT	C09 Min, et al., "Atomic layer deposition of TiN thin films by sequential introduction of Ti precursor and NH/sub3/", <i>Symp.: Advanced Interconnects and Contact Materials and Processes for Future Integrated Circuits</i> (Apr. 13-16, 1998), pp. 337-342.

Examiner	T. M. Thomas	Date Considered	01/16/03
----------	--------------	-----------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5192		Serial No. 09/776,329	
<b>LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>					Applicant Seutter, et al.		Confirmation No. 9575	
(Use several sheets if necessary)					Filing Date February 02, 2001		Group 2812	
Examiner Unknown								
<b>U.S. Patent Documents</b>								
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
TMT	A81	5,851,849	12/22/98	Comizzoli et al.	438	38	05/22/1997	
	A82	5,855,675	01/05/99	Doering et al.	118	719	03/03/1997	
	A83	5,855,680	01/05/99	Soininen et al.	118	719	11/28/1995	
	A84	5,858,102	01/12/99	Tsai	118	719	02/14/1998	
	A85	5,904,565	05/18/1999	Nguyen, et al.	438	687	07/17/1997	
	A86	5,923,056	07/13/99	Lee et al.	257	192	03/12/1998	
	A87	5,923,985	07/13/99	Aoki et al.	438	301	01/14/1997	
	A88	5,925,574	07/20/99	Aoki et al.	437	31	04/10/1992	
	A89	5,942,040	08/24/99	Kim et al.	118	726	08/27/1997	
	A90	5,947,710	09/07/1999	Cooper, et al.	418	63	06/16/1997	
	A91	6,001,669	12/14/99	Gaines et al.	438	102	07/21/1992	
	A92	6,015,590	01/18/00	Suntola et al.	427	255.23	11/28/1995	
TMT	A93	6,025,627	02/15/00	Forbes et al.	257	321	05/29/1998	
<b>Foreign Patent Documents</b>								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B25	0 442 490 A1	08/21/1991	EP	C30B	25/02		X
J	B26	0 344 352 A1	12/06/1989	EP	H01L	39/24		X
TMT	B27	62-091495 A	04/25/1987	JP	C30B	25/02		X
<b>OTHER ART</b>								
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.						
TMT	C10	Klaus, et al., "Atomic Layer Deposition of Tungsten using Sequential Surface Chemistry with a Sacrificial Stripping Reaction," Thin Solid Films 360 (2000), Pages 145 – 153, (Accepted Nov. 16, 1999).						
TMT	C11	Min, et al., "Metal-Organic Atomic-Layer Deposition of Titanium-Silicon-Nitride Films", <i>Applied Physics Letters</i> , American Inst. Of Physics, Vol 75(11) (Sept. 13, 1999).						
Examiner T. M. Thomas					Date Considered 01-16-03			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.								

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5192		Serial No. 09/776,329	
<b>LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>					Applicant Seutter, et al.		Confirmation No. 9575	
(Use several sheets if necessary)					Filing Date February 02, 2001		Group 2812	
Examiner Unknown								



U.S. Patent Documents							
*Examiner Initial	Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
TMT	A94	6,036,773	03/14/00	Wang et al.	117	97	03/27/1997
	A95	6,042,652	03/28/00	Hyun et al.	118	719	09/07/1999
	A96	6,043,177	03/28/00	Falconer et al.	502	4	01/21/1997
	A97	6,124,158	09/26/00	Dautartas et al.	438	216	06/08/1999
	A98	6,113,977	09/05/00	Soininen et al.	427	64	09/11/1997
	A99	6,130,147	10/10/00	Major et al.	438	604	03/18/1997
	A100	6,139,700	10/31/00	Kang et al.	204	192.17	09/30/1998
	A101	6,174,377	01/16/2001	Doering, et al.	118	729	01/04/1999
	A102	6,174,809	01/16/2001	Kang, et al.	438	682	12/15/1998
	A103	6,200,893	03/13/2001	Sneh	438	685	03/11/1998
	A104	6,203,613	03/20/2001	Gates, et al.	117	104	10/19/1999
TMT	A105	6,207,302	03/27/2001	Sugiura, et al.	428	690	03/02/1998

Foreign Patent Documents							
*Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
						YES	NO
TMT	B28	60-065712 A	04/15/1985	JP	C01B	33/113	X
	<del>B29</del>	<del>03-048421</del>	<del>03/01/1991</del>	<del>JP</del>	<del>H01L</del>	<del>21/302</del>	<del>X</del>
	<del>B30</del>	<del>03-286531</del>	<del>12/17/1991</del>	<del>JP</del>	<del>H01L</del>	<del>21/316</del>	<del>X</del>


OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
TMT	C12 Martensson, et al., "Atomic Layer Epitaxy of Copper on Tantalum", <i>Chemical Vapor Deposition</i> , 3(1) (Feb. 1, 1997), pp. 45-50.
TMT	C13 Ritala, et al. "Atomic Layer Epitaxy Growth of TiN Thin Films", <i>J. Electrochem. Soc.</i> , 142(8) (Aug. 1995), pp. 2731-737.
TMT	C14 Elers, et al., "NbC15 as a precursor in atomic layer epitaxy", <i>Appl. Surf. Sci.</i> , Vol. 82/83 (1994), pp. 468-474.

Examiner	T. M. Thomas	Date Considered	01-16-03
----------	--------------	-----------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.



U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5192		Serial No. 09/776,329	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT					Applicant Seutter, et al.		Confirmation No. 9575	
(Use several sheets if necessary)					Filing Date February 02, 2001		Group 2812	
Examiner Unknown								



U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
TMT	A106	6,248,605	06/19/2001	Harkonen, et al.	438	29	06/02/1999
	A107	6,270,572	08/07/2001	Kim, et al.	117	93	08/09/1999
	A108	6,287,965	09/11/2001	Kang, et al.	438	648	02/23/2000
	A109	6,291,876	09/18/2001	Stumborg, et al.	257	632	08/20/1998
	A110	6,305,314	10/23/2001	Sneh, et al.	118	723 R	12/17/1999
	A111	6,306,216	10/23/2001	Kim, et al.	118	725	07/12/2000
	A112	6,316,098	11/13/2001	Yitzchaik, et al.	428	339	03/23/1999
	A113	2001/0000866	05/10/2001	Sneh, et al.	118	723 R	11/29/2000
	A114	2001/0009140	07/26/2001	Bondestam, et al.	118	725	01/25/2001
	A115	2001/0011526	08/09/2001	Doering, et al.	118	729	01/16/2001
TMT	A116	2001/0031562	10/18/2001	Raaijmakers, et al.	438	770	02/22/2001

Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B31	04-031396 A	02/03/1992	JP	C30B	25/14		X
	<del>B32</del>	<del>06-291048</del>	<del>10/18/1994</del>	<del>JP</del>	<del>H01L</del>	<del>21/205</del>		<del>X</del>
	<del>B33</del>	<del>08-264530</del>	<del>10/11/1996</del>	<del>JP</del>	<del>H01L</del>	<del>21/3205</del>		<del>X</del>
TMT	B34	11-269652	10/05/1999	JP	C23C	16/44		X

OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
TMT	C15 Lee, "The Preparation of Titanium-Based Thin Film by CVD Using Titanium Chlorides as Precursors", <i>Chemical Vapor Deposition</i> , 5(2) (Mar. 1999), pp. 69-73.
TMT	C16 Martensson, et al., "Atomic Layer Epitaxy of Copper, Growth & Selectivity in the Cu (II)-2,2,6,6-Tetramethyl-3, 5-Heptanedion ATE/H2 Process", <i>J. Electrochem. Soc.</i> , 145(8) (Aug. 1998), pp. 2926-2931.
Examiner	T. M. Thomas
Date Considered	01-16-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)				Docket No. AMAT/5192		Serial No. 09/776,329	
<b>LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>				Applicant Seutter, et al.		Confirmation No. 9575	
(Use several sheets if necessary)				Filing Date February 02, 2001		Group 2812	
Examiner Unknown							

APR 04 2002  
PATENT & TRADEMARK OFFICE

U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
TMT	A117	2001/0034123	10/25/2001	Jeon, et al.	438	643	04/06/2001
	A118						
	A119						
	A120						
	A121						
	A122						

Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B35	2001-62244	03/13/2001	JP	B01D	53/34		X
	<del>B36</del>	<del>198-20-147</del>	<del>07/01/1999</del>	<del>DE</del>	<del>H01L</del>	<del>21/3205</del>		<del>X</del>
	<del>B37</del>	<del>100-27-017</del>	<del>01/09/1997</del>	<del>DE</del>	<del>H01L</del>	<del>21/283</del>		<del>X</del>
	<del>B38</del>	<del>2-626-110</del>	<del>07/21/1989</del>	<del>FR</del>	<del>H01L</del>	<del>39/24</del>		<del>X</del>
	<del>B39</del>	<del>2-692-597</del>	<del>12/24/1993</del>	<del>FR</del>	<del>G23C</del>	<del>16/00</del>		<del>X</del>
TMT	B40	2 355 727A	05/02/12001	GB	C23C	16/44		X

OTHER ART		
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
TMT	C17	Min, et al., "Chemical Vapor Deposition of Ti-Si-N Films with Alternating Source Supply", <i>Mat., Res. Soc. Symp. Proc.</i> , Vol. 564 (Apr. 5, 1999), pp. 207-210
TMT	C18	Bedair, "Atomic layer epitaxy deposition processes", <i>J. Vac. Sci. Technol.</i> 12(1) (Jan/Feb 1994)
TMT	C19	Yamaga, et al., "Atomic layer epitaxy of ZnS by a new gas supplying system in a low-pressure metalorganic vapor phase epitaxy", <i>J. of Crystal Growth</i> 117 (1992), pp. 152-155
TMT	C20	Elam, et al., "Nucleation and growth during tungsten atomic layer deposition on SiO <sub>2</sub> surfaces," <i>Thin Solid Films</i> 386 (2001) Pages 41 - 52, (Accepted Dec. 14, 2000).
Examiner T. M. Thomas		Date Considered 01-16-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

Form PTO-1449

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

CASE NO.  
5192

SERIAL NO.  
09/776,329

**INFORMATION DISCLOSURE STATEMENT**  
(Use separate sheets if necessary)

APPLICANT  
Seutter et al.

FILING DATE  
February 2, 2001

GROUP  
2822  
Not yet assigned

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
TMT	5,972,430	10/26/99	DiMeo Jr. et al.	427	255.32	
I	5,916,365	06/29/99	Sherman	117	92	
TMT	5,879,459	03/9/99	Gadgil et al.	118	715	

**FOREIGN PATENT DOCUMENTS**

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	NO

**OTHER (Including Author, Title, Date, Pertinent Pages, Etc.)**

Duplicates

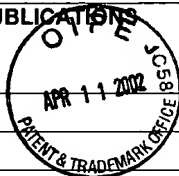
TMT	Ritala et al. "Communications: Perfectly Conformal TiN and Al <sub>2</sub> O <sub>3</sub> Films Deposited by Atomic Layer Deposition" Chem. Vap. Deposition, 1999, 5, No. 1, pp. 7-9
	Ohba et al. "Thermal Decomposition of Methylhydrazine and Deposition Properties of CVD TiN Thin Films" Conference Proceedings, Advanced Metallization for ULSI Applications, pp. 143-149, 1994
	Scheper et al. "Low-Temperature Deposition of Titanium Nitride Films from Dialkylhydrazine-Based Precursors" Materials Science in Semiconductor Processing 2, 1999, pp. 149-157
	Suzuki et al. "A 0.2-μm Contact Filling by 450°C-Hydrazine-Reduced TiN Film with Low Resistivity" JEDM 92-979, pp. 11.8.1-11.8.3
	Suzuki et al. "LPCVD-TiN Using Hydrazine and TiCl <sub>4</sub> " VMIC Conference, pp. 418-423, June 8-9, 1993

EXAMINER  
T. M. Thomas

DATE CONSIDERED  
01-16-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		APPM/5192	09/776,329
<b>SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>		Applicant	Confirmation No.:
		Seutter, et al.	9575
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		February 2, 2001	2812

**U.S. Patent Documents**


*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
TMT	A1	4,813,846	03/21/89	Helms	414	744.1	04/29/87
	A2	4,917,556	04/17/90	Stark et al.	414	217	05/26/89
	A3	4,951,601	08/28/90	Maydan, et al.	118	719	06/23/89
	A4	5,000,113	03/19/91	Wang et al.	118	723	12/19/86
	A5	5,028,565	07/02/91	Chang, et al.	437	192	08/25/89
	A6	5,173,474	12/22/92	Connell, et al.	505	1	03/11/91
	A7	5,186,718	02/16/93	Tepman et al.	29	25.01	04/15/91
	A8	5,205,077	04/27/93	Wittstock	51	165 R	08/28/91
	A9	5,234,561	08/10/93	Randhawa et al.	204	192.38	08/25/88
	A10	5,259,881	11/09/93	Edwards, et al.	118	719	05/17/91
	A11	5,286,296	02/15/94	Sato et al.	118	719	01/09/92
	A12	5,580,380	12/03/96	Liu et al.	117	86	01/30/95
	A13	5,609,689	03/11/97	Kato et al.	118	719	06/03/96
	A14	5,667,592	09/16/97	Boitnott et al.	118	719	04/16/96
	A15	5,674,786	10/07/97	Turner et al.	437	225	06/05/95
	A16	5,695,564	12/09/97	Imahashi	118	719	08/03/95
	A17	5,730,801	03/24/98	Tepman et al.	118	719	08/23/94
	A18	5,788,447	08/04/98	Yonemitsu et al.	414	217	08/05/96
	A19	5,788,799	08/04/98	Steger, et al.	156	345	06/11/96
	A20	5,801,634	09/01/98	Young et al.	340	635	09/08/97
	A21	5,856,219	01/05/99	Naito et al.	438	241	08/18/97
	A22	5,866,213	02/02/99	Foster et al.	427	573	07/19/97
	A23	5,866,795	02/02/99	Wang et al.	73	1.36	03/17/97
	A24	5,882,165	03/16/99	Maydan et al.	414	217	09/10/97
	A25	5,882,413	03/16/99	Beaulieu et al.	118	719	07/11/97
TMT	A26	5,928,389	07/27/99	Jevtic	29	25.01	10/21/96

Examiner T. M. Thomas Date Considered 01-26-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.



U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. APPM/5192		Serial No. 09/776,329	
<b>SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>					Applicant Seutter, et al.		Confirmation No.: 9575	
(Use several sheets if necessary)					Filing Date February 2, 2001		Group 2812	
Examiner Unknown								



Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B1	58-098917	06/13/1983	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B2	58-100419	06/15/1983	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B3	61-035847	02/20/1986	JP	B01J	19/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B4	61-210623	09/18/1986	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B5	62-069508	03/30/1987	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B6	62-141717	06/25/1987	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B7	62-167297	07/23/1987	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B8	62-171999	07/28/1987	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B9	62-232919	10/13/1987	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B10	63-062313	03/18/1988	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B11	63-085098	04/15/1988	JP	C30B	21/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B12	63-090833	04/21/1988	JP	H01L	21/365	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B13	63-222420	09/16/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B14	63-222421	09/16/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B15	63-227007	09/21/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B16	63-252420	10/19/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B17	63-266814	11/02/1988	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B18	64-009895	01/13/1989	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B19	64-009896	01/13/1989	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B20	64-009897	01/13/1989	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B21	64-037832	02/08/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B22	64-082615	03/28/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B23	64-082617	03/28/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TMT	B 24	64-082671	03/28/1989	JP	H01L	29/78	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner <u>T. M. Thomas</u>	Date Considered <u>01-26-03</u>
------------------------------	---------------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		APPM/5192	09/776,329
<b>SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>		Applicant	Confirmation No.:
		Seutter, et al.	9575
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		February 2, 2001	2812

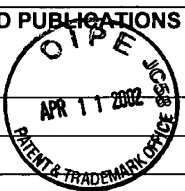
**Foreign Patent Documents**

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B25	64-082676	03/28/1989	JP	H01L	29/80	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B26	64-090524	04/07/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B27	01-103982	04/21/1989	JP	C30B	23/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B28	01-103996	04/21/1989	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B29	01-117017	05/09/1989	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B30	01-143221	06/05/1989	JP	H01L	21/314	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B31	01-143233	06/05/1989	JP	H01L	21/76	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B32	01-154511	06/16/1989	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B33	01-236657	09/21/1989	JP	H01L	29/80	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B34	01-245512	09/29/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B35	01-264218	10/20/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B36	01-270593	10/27/1989	JP	C30B	25/02	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B37	01-272108	10/31/1989	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B38	01-290221	11/22/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B39	01-290222	11/22/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B40	01-296673	11/30/1989	JP	H01L	29/88	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B41	01-303770	12/07/1989	JP	H01L	39/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B42	01-305894	12/11/1989	JP	C30B	23/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B43	01-313927	12/19/1989	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B44	02-012814	01/17/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B45	02-014513	01/18/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B46	02-017634	01/22/1990	JP	H01L	21/225	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B47	02-063115	03/02/1990	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TMT	B48	02-074029	03/14/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner T. M. Thomas Date Considered 01-26-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. APPM/5192		Serial No. 09/776,329	
<b>SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>					Applicant Seutter, et al.		Confirmation No.: 9575	
(Use several sheets if necessary)					Filing Date February 2, 2001		Group 2812	
Examiner Unknown								



Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B49	02-074587	03/14/1990	JP	C30B	23/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B50	02-106822	04/18/1990	JP	H01B	13/00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B51	02-129913	05/18/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B52	02-162717	06/22/1990	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B53	02-172895	07/04/1990	JP	C30B	29/36	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B54	02-196092	08/02/1990	JP	C30B	25/14	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B55	02-203517	08/13/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B56	02-230690	09/13/1990	JP	H05B	33/10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B57	02-230722	09/13/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B58	02-246161	10/01/1990	JP	H01L	29/784	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B59	02-264491	10/29/1990	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B60	02-283084	11/20/1990	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B61	02-304916	12/18/1990	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B62	03-019211	01/28/1991	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B63	03-022569	01/30/1991	JP	H01L	29/804	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B64	03-023294	01/31/1991	JP	C30B	25/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B65	03-023299	01/31/1991	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B66	03-044967	02/26/1991	JP	H01L	29/48	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B67	03-070124	03/26/1991	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B68	03-185716	08/13/1991	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B69	03-208885	09/12/1991	JP	C30B	23/02	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B70	03-234025	10/18/1991	JP	H01L	21/318	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B71	03-286522	12/17/1991	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TMT	B72	04-031391	02/03/1992	JP	C30B	23/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner	Date Considered 01-26-03
----------	--------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.



U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		APPM/5192	09/776,329
<b>SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>		Applicant	Confirmation No.:
		Seutter, et al.	9575
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		February 2, 2001	2812

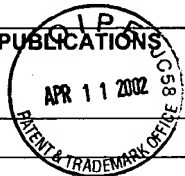
**Foreign Patent Documents**

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B73	04-031396	02/03/1992	JP	C30B	25/14	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B74	04-100292	04/02/1992	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B75	04-111418	04/13/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B76	04-132214	05/06/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B77	04-132681	05/06/1992	JP	C30B	25/14	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B78	04/151822	05/25/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B79	04-162418	06/05/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B80	04-175299	06/23/1992	JP	C30B	29/68	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B81	04-186824	07/03/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B82	04-212411	08/04/1992	JP	H01L	21/203	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B83	04-260696	09/16/1992	JP	C30B	29/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B84	04-273120	09/29/1992	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B85	04-285167	10/09/1992	JP	C23C	14/54	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B86	04-291916	10/16/1992	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B87	04-325500	11/13/1992	JP	C30B	33/00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B88	04-328874	11/17/1992	JP	H01L	29/804	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B89	05-029228	02/05/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B90	05-047665	02/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B91	05-047666	02/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B92	05-047668	02/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B93	05-074717	03/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B94	05-074724	03/26/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B95	05-102189	04/23/1993	JP	H01L	21/336	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TMT	B96	05-160152	06/25/1993	JP	H01L	21/336	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner <u>T. M. Thomas</u>	Date Considered <u>01-26-03</u>
------------------------------	---------------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5192	Serial No. 09/776,329
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Seutter, et al.	Confirmation No.: 9575
(Use several sheets if necessary)		Filing Date February 2, 2001	Group 2812
Examiner Unknown			



## Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B97	05-175143	07/13/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B98	05-175145	07/13/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B99	05-182906	07/23/1993	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B100	05-186295	07/27/1993	JP	C30B	25/02	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B101	05-206036	08/13/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B102	05-234899	09/10/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B103	05-235047	09/10/1993	JP	H01L	21/338	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B104	05-251339	09/28/1993	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B105	05-270997	10/19/1993	JP	C30B	29/68	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B106	05-283336	10/29/1993	JP	H01L	21/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B107	05-291152	11/05/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B108	05-304334	11/16/1993	JP	H01L	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B109	05-343327	12/24/1993	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B110	05-343685	12/24/1993	JP	H01L	29/784	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B111	06-045606	02/18/1994	JP	H01L	29/784	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B112	06-132236	05/13/1994	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B113	06-177381	06/24/1994	JP	H01L	29/784	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B114	06-196809	07/15/1994	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B115	06-222388	08/12/1994	JP	G02F	1/136	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B116	06-224138	08/12/1994	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B117	06-230421	08/19/1994	JP	G02F	1/136	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B118	06-252057	09/09/1994	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B119	07-070752	03/14/1995	JP	C23C	16/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TMT	B120	07-086269	03/13/1995	JP	H01L	21/314	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner T. M. Thomas Date Considered 01-26-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5192	Serial No. 09/776,329
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Seutter, et al.	Confirmation No.: 9575
(Use several sheets if necessary)		Filing Date February 2, 2001	Group 29 2812
Examiner Unknown			



## Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
TMT	B121	07-086269	03/13/1995	JP	H01L	21/314	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B122	08-181076	07/12/1996	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B123	08-245291	09/24/1996	JP	C30B	25/14	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B124	09-260786	10/03/1997	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B125	09-293681	11/11/1997	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B126	10-188840	07/21/1998	JP	H01J	29/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B127	10-190128	07/21/1998	JP	H01S	3/18	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B128	10-308283	11/17/1998	JP	H05B	33/22	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B129	11-269652	10/05/1999	JP	C23C	16/44	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B130	2000-031387	01/28/2000	JP	H01L	27/04	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B131	2000-058777	02/25/2000	JP	H01L	27/108	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B132	2000-068072	03/03/2000	JP	H05B	33/22	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B133	2000-087029	03/28/2000	JP	C09K	11/08	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B134	2000-138094	05/16/2000	JP	H05B	33/10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B135	2000-218445	08/08/2000	JP	B23P	6/00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B136	2000-319772	11/21/2000	JP	C23C	14/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B137	2000-319772	03/28/2000	JP	C23C	16/00	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B138	2000-340883	12/08/2000	JP	H01S	5/125	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B139	2000-353666	12/19/2000	JP	H01L	21/205	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B140	2001-020075	01/23/2001	JP	C23C	16/44	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B141	2001-152339	06/05/2001	JP	C23C	16/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B142	2001-172767	06/26/2001	JP	C23C	16/40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B143	2001-189312	07/10/2001	JP	H01L	21/316	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B144	2001-217206	08/10/2001	JP	H01L	21/285	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	B145	2001-220287	08/14/2001	JP	C30B	25/02	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TMT	B146	2001-220294	08/14/2001	JP	C30B	29/20	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Examiner

J. M. Thomas

Date Considered

01-26-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

APR 11 2002  
PATENT & TRADEMARK OFFICE

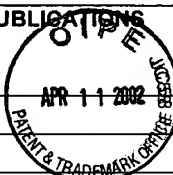
2812

[illegible]

Dat Considered 01-26-03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5192	Serial No. 09/776,329
<b>SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT</b>		Applicant Seutter, et al.	Confirmation No.: 9575
(Use several sheets if necessary)		Filing Date February 2, 2001	Group 2812
Examiner Unknown			



OTHER ART			
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.	
TMT	C1	Ohba, et al., "Thermal Decomposition of Methylhydrazine and Deposition Properties of CVD TiN Thin Films", Conference Proceedings, Advanced Metallization for ULSI Applications in 1993 (1994), pp. 143-149 ✓	
	C2	Scheper, et al., "Low-temperature deposition of titanium nitride films from dialkylhydrazine-based precursors", Materials Science in Semiconductor Processing 2 (1999), pp. 149-157 ✓	
	C3	Suzuki, et al., "A 0.2- $\mu$ m contact filling by 450°C-hydrazine-reduced TiN film with low resistivity", IEDM 92-979, pp. 11.8.1 - 11.8.3 ✓	
	C4	Suzuki, et al., "LPCVD-TiN Using Hydrazine and TiCl <sub>4</sub> ", VMIC Conference (June 8-9, 1993), pp. 418-423	
	C5	IBM Tech. Disc. Bull. "Knowledge-Based Dynamic Scheduler in Distributed Computer Control, (June 1990), pp. 80-84	
	C6	IBM Tech. Disc. Bull. "Multiprocessor and Multitasking Architecture for Tool Control of the Advanced via Inspection Tools" (May 1992), pp. 190-191	
	C7	McGeachin, S., "Synthesis and properties of some $\beta$ -diketimines derived from acetylacetone, and their metal complexes", Canadian J. of Chemistry, Vol. 46 (1968), pp.1903-1912	
	C8	Solanki, et al., "Atomic Layer deposition of Copper Seed Layers", Electrochemical and Solid State Letters, 3(10) (2000), pp. 479-480	
	C9	NERAC.COM Retro Search: Atomic Layer Deposition of Copper, dated October 11, 2001	
	C10	NERAC.COM Retro Search: Atomic Layer Deposition / Epitaxy Aluminum Oxide Plasma, dated October 2, 2001	
	C11	NERAC Search abstract of "Atomic Layer deposition of Ta and Ti for Interconnect Diffusion Barriers", by Rosnagel, et al., J. Vac. Sci. & Tech., 18(4) (July 2000)	
	C12	Abstracts of articles re atomic layer deposition	
	C13	Abstracts of search results re atomic layer deposition, search dated January 24, 2002	
	C14	Abstracts of articles re atomic layer deposition and atomic layer nucleation	
TMT	C15	Abstracts of articles re atomic layer deposition and semiconductors and copper	
Examiner T. M. Thomas		Date Considered 01-26-03	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.



